



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,139	04/01/2004	Ming-Chieh Tsou	2019-0245PUS1	6548
2292	7590	12/16/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH			WILLIAMS, DON J	
PO BOX 747			ART UNIT	
FALLS CHURCH, VA 22040-0747			PAPER NUMBER	
			2878	

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/814,139

Applicant(s)

TSOU ET AL.

Examiner

Don Williams

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on April 1, 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 12-16 is/are rejected.
- 7) ☐ Claim(s) 5-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on April 1, 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 12-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Inui (US2001/0025969).

As to claim 1, Inui discloses an image sensing module capable of fast transferring signals comprising optical sensor sets having a plurality of optical sensors (301), optical sensors (301) being used for receiving optical signals (a, b, c, d, e, f, g, h, i, j, k, l) and generating a plurality of corresponding charge signals (a, b, c, d, e, f, g, h, i, j, k, l); a plurality of readout circuits (304) each having a plurality of input terminals connected to a portion of optical sensors (301) and an output terminal, output terminals of readout circuits (304) outputting in order charge signals (a, b, c, d, e, f, g, h, i, j, k, l) received by input terminals; and a plurality of amplifying circuits (305) each having an input terminal and an output terminal, each input terminals of amplifying circuits (305) being independently connected to one of output terminals of readout circuits (304); whereby input terminals of amplifying circuits (305) receive and amplify charge signals (a, b, c, d, e, f, g, h, i, j, k, l) outputted in order by output terminals of readout circuits (304), and output terminals of amplifying circuits (305) then output amplified charge

signals (a, b, c, d, e, f, g, h, i, j, k, l) one by one, (see figure 2, column, paragraph [0011], figure 3, paragraph [0039], paragraph [0039]).

As to claim 2, Inui discloses optical sensors (301). The optical sensors are functionally equivalent to the photodiode and phototransistor wherein a charge is created when light is incident on the optical sensors.

As to claim 3, Inui discloses input terminals of read out circuits (304) are connected to optical sensors (301) in a discontinuous way, (see figure 3).

As to claim 4, Inui discloses read out circuits (106, 111), having a plurality of switches correspondingly connected to optical sensors (101), shift registers (105, 111) correspondingly connected to switches having on/off capability wherein the shift registers output charge signals (a, b, c, d, e, f, g, h, i, j, k, l) which are amplified and read-out at the output (108), (see figure 1, figure 2 paragraph [0005], paragraph [0006], paragraph [0011]).

As to claim 12, Inui discloses an image sensing method capable of fast transferring signal comprising the steps of providing m charge signals (a, b, c, d, e, f, g, h, i, j, k, l) by detecting light; dividing said m charge signals (a, b, c, d, e, f, g, h, i, j, k, l) into n sets of outputs in a discontinuous order; capturing charge signals (a, b, c, d, e, f, g, h, i, j, k, l) of each set at the same time; and outputting captured charge signals in an orderly and time-sharing way, (see figure 1, figure 2, paragraph [0005], paragraph [0006], paragraph [0011], paragraph [0016], paragraph [0005], paragraph [0040]).

As to claim 13, Inui discloses the division of n sets of outputs (a, b, c, d, e, f, g, h, i, j, k, l) is accomplished with n readout circuits (304), (see, paragraph [0016], figure 3

paragraph [0039]).

As to claim 14, Inui discloses each readout circuit outputs (m/n) charge signals in order, (see paragraph [0016], figure 3, paragraph [0039].

As to claim 15, Inui discloses the arrangement order of captured n charge signals (a, b, c, d, e, f, g, h, i, j, k, l) is continuous, (figure 2, paragraph [0011], figure 3, paragraph [0039], paragraph [0040]).

As to claim 16, Inui discloses captured charge signals (a, b, c, d, e, f, g, h, i, j, k, l) have been amplified before outputted in an orderly and time-sharing way, figure 1, paragraph [0006], paragraph [0016], figure 3, paragraph [0039], paragraph [0040]).

Allowable Subject Matter

Claims 5-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to disclose a first terminal of the first switch being connected to the output terminal of read out circuit, a first terminal of the second switch being connected to the second terminal of the first switch and a grounded second terminal, a first terminal of the third switch being connected to the second input terminal of the operational amplifier and a second terminal connected to the output terminal of the operational amplifier, a first terminal of the fourth switch being connected to the output terminal of the operational amplifier and a second terminal, a first capacitor having a

Art Unit: 2878

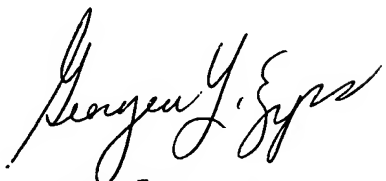
first terminal connected to second terminal of the first switch and a second terminal connected to second input terminal of operation amplifier; and a second capacitor having a first terminal connected to second input terminal of operation amplifier and a second terminal connected to output terminal of operation amplifier.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Don Williams whose telephone number is 571-272-8538. The examiner can normally be reached on 8:30a.m. to 5:30a.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800